FY 1999 Technology Deployment in Environmental Management

Engineering Tomorrow's Solutions Today

Site Technology Coordination Group / Technology Deployment Center
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Personal Ice Cooling System

Problem: *Many D&D activities are performed in hot weather and usually require the use of various types and layers of Personal Protective Equipment (PPE). PPE limits the body's ability to cool itself.*

Baseline Technology: *When working in some hot conditions, employees require cool-down breaks for 30 minutes or half of their stay time, whichever is longer.*

Innovative Technology: *The Personal Ice Cooling System (PICS) manufactured by Delta Temax, Inc., consists of a full body suit similar to long underwear and has tubing sewn into the garment. A small battery-powered pump circulates chilled water from a bottle with ice through the tubing in the suit.*

Comparison: *PICS is able to control heat stress with less cool-down breaks, thus increasing worker productivity and decreasing the number of PPEs used.*

Benefits: *Using PICS ensures a safer body temperature for workers and has resulted in longer stay times and the use of less PPEs. A cost savings of about $38K was realized during the D&D of TAN's PREPP facility.*

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